## SCIENCE FOR THE PEOPLE,

AUTUMN BUDS.

"In all trees," says Mr. Grant Allen, in Knowledge, "the buds which represent the future branches for next year's growth are produced and elaborated in the preceding antumn. As the dead leaves fall off in October, the living chlorophyll and protoplasm which formed their active functional parts are withdrawn into the permanent tissues of the trees; and their withdrawal, anded by various internal chemical changes, chiefly of the nature of oxidation, leaves the minor coloring matters of the tion, leaves the minor coloring matters of the foliage far more prominent than before, and so gives rise to the glow of crimson and gold which we commonly know as autumn tints. Outside the buds are enveloped in dry, brown scales, which makes the control of the cont scales, which make them very inconspicuous to the eyes of their enemies, who would ether-wise quickly devour these rising hopes of the future season. These scales also act as great-coats or cleaks to cover the dermant living germs from the cold of winter. Everybody knows that frost kills plants; and everybody has noticed that if the foliage expands in

knows that frost kills plants; and everybody has noticed that if the foliage expands in spring tor soon, it is very apt to get nipped off by a late return of morning rime.

Now, what is true of the vital matter in leaves generally, is especially true of the vital matter in very young and undeveloped leaves. It cannot resist the slightest frost. Hence natural selection has in the course of long ages insured the best possible, means for keeping the true inner bud warm and snug. If you pick off some of the small brown scales, you will see how closely they are packed together, overlapping one another in regular rows, or imbricated, as the technical botanists call it. That is an unusually good word, imbricated, by way of scientific terminology; for it means arranged like tiles on a roof; and in fact the scales do really lap over one another like the scales do really lap over one another like the litalian tiles that one sees on cottages in Southern Europe. These short, broad, brown, closeset scales are themselves by origin abortive leaves; or, to put it more truly, they are leaves which have given up their original function of digesting fresh material from the air, and have taken to the new function of protective their more rative sisters from the sharp air, and have taken to the new function of pro-tecting their more active sisters from the sharp teeth of the frost. Underneath the outer brown pieces, however, you come at last to some tiny bright green knobs; and these shapeless little things are the living parts which carry on the continuity of the bush from one season to another.

SUN SPOTS AND MAGNETIC STORMS. Professor Schuster, the English astronomer, in a recent lecture at Manchester thus spoke of sun spots: "San spots were seldom seen at the poles, and seldom near the equator, though poles, and seldom near the equator, though sometimes seen at both. We were now after a long protracted absence of sun spots rapidly approaching their maximum, which would probably be reached in a few months, when there would be more than during the next eleven years. They would then slowly increase in number, until in five, six or seven cleven years. They would then slowly increase in number, until in five, six, or seven years there would hardly be a sun spot seen for some months, and then they would begin to appear again, and eleven years hence they would probably be as numerous as now. These changes were not absolutely regular, the number of years having varied from eight and one-half to thirty, but they oscillated round the period of thirty, but they oscillated round the period of eleven years. The protuberances on the sun's surface occurred in the same way. Magnetic surface occurred in the same way. Magnetic storms took place much more frequently when there were many sun spots that when there were few, and the aurora borealis was very nearly related to them. For some years we had seen of the latter few, and there were few sun spots then, while now hardly a day passed without an aurora being observed somewhere, and this was always accompanied by magnetic constant.

sun spots then, while now hardly a day passed without an aurora being observed somewhere, and this was always accompanied by magnetic storms. There was a striking and regular connection between them. When a sun spot broke out it was very probable we should see an aurora, and were almost certain to have a magnetic storm. A few weeks ago there was a very big spot on the sun's surface, and auroras were seen all over England where the sky was clear. This connection between the sun and the earth was one of the greatest scientific mysteries of the are, and we were absolutely without any explanation of it."

BIRDS AND TELEGRAPH WIRES.

"At a recent meeting of the Electrotechnic Society of Berlin, Herr Massmann read a paper on some observations which he had made on the Imperial telegraph lines at the instance of the Secretary of the Post Office. He found that in districts where there are no trees the smaller birds of prey, such as crows and magpies, are very fond of roosting on telegraph poles, while sparrows, starlings and swallows frequently sparrows of mankind have the nation of the probability of the post of the as poles treated with sulphate of copper, chlo-ride of zinc, or sublimate of mercay. Some even state that they will attack crossoted poles. The theory that the birds mistake the viorations of the wires in the poles for insects humming is doubted by Herr Massmann, who declares that they often find insects in the dry

SQUARING THE CIRCLE. In his recent address before the British Royal

Society, Dr. Spottiswoode regarded as an important step gained during the past year, Lindemann's paper on the number represented by the Greek letter Pi and equivalent to 3.14159, etc. It had long since been shown, says Dr. Spottiswoode, that both the numbers Pi, and Pi squared, are irrational. Out hithertone in the squared are irrational. spottiswoode, that both the numbers Pt, and Pt squared, are irrational; but hitherto no proof existed of the impossibility of effecting the quadrature of the circle by means of the straight line and circle, and ruley and comstraight line and circle, and rule; and com-passes. Regarded from an algebraical point of view, every such construction must depend upon the solution of a quadratic equation, or rather of a series of quadratics whereof the first has for its coefficients rational numbers, and the succeeding members of the series only such irrational numbers as occur in the solution of their predecessors. This being so, the final of their predecessors. This being so, the final equation can always be transformed, by transequation can always be transformed, by transposition of terms and squaring, into an equation of an even degree with rational coefficients. And, consequently, if it can be proved that Pi cannot be the root of any algebraic equation whatever with rational coefficients, the impossibility of the quadrature of the circle will be thereby also proved. Starting from Hermite's researches ("Comptes Rendus," 1873). Lindemann has supplied the proof re-It must be admitted that the proof is neither very simple nor very easy to follow; and it remains only to be hoped that it may some day assume such a form as may influence the minds which still exercise themseives upon the hopeless problem of squaring the circle

The London Lancet evidently believes that naked electric are lights are injurious to the eye, and suggests that before such lights are common some mode of mitigating their intensity should be devised. The electric light, it says, is too hard; it needs to be softened. The eye, and suggests that before such lights are common some mode of mitigating their intensity should be devised. The electric light, it says, is too hard; it needs to be softened. The waves of motion are too short, and the outstroke—so to say—joins the instroke at too acute an angle. This might doubtless be obviated by employing suitable material for globes and shades, but perhaps the best plan would be to break up and scatter the rays of light by reflection. If a small convex reflector were placed immediately below the light in the protecting globe, and one of larger dimensions above it so as to secure a double reflection with ultimate divergence downward and outward, the effect would be to cause the "rays" of light to fall obliquely on all objects within the immediate area of illumination. This would, perhaps, obviate the need of colored glasses, which the promoters of the electric light seem to dislike. Certainly there is a considerable sacrifice of power in the use of the opaline globe—so much indeed, that some of the districts lighted by electricity displayed through this medium do not present any obvious superiority over gas. "We throw out the suggestion," says The Lancet, "for what it is worth. Something must be done, for, as it is, the electric light is 'try-

THE ELECTRIC LIGHT AND THE EYE

ing to the eyes,' which means that it is in danger of injuring them, and already, there is reason to believe, mischief has been wrought by its use. For pure comfort there is nothing like the light given by the old-fashioned pure

POLLUTION OF THE AIR. A recent writer in Nature called attention to the pollution of the air by the burning of coal, and calculated that in the year 1900 all animal life would cease on the globe, from the amount of carbonic dioxide thus produced. But another correspondent, points out that most of another correspondent points out that most of this gas is washed out of the air by rain. There were, however, some products of com-bustion, or rather of incomplete combustion, as There were, however, some products of combustion, or rather of incomplete combustion, as hydrogen and the hydrocarbons, which are not removed by the rain. Of these unburned gases it is estimated that 100,000,000 tons have escaped into the air during the last thirty years. What will be the results of this accumulation? According to Professor Tyndall's researches, hydrogen, marsh gas and ethylene have the property in a very bigh degree of absorbing and radiating heat, and so much so that a very small proportion, of only say one-thousandth part, had very great effect. From this we may conclude that the increasing pollution of the atmosphere will have a marked influence on the climate of the world. The mountainous regions will be colder, the Arctic regions will be colder, the tropics will be warmer, and throughout the world the nights will be colder, and the days warmer. In the temperate zone winter will be colder, and generally differences will be greater, winds, storms, rainfall greater. storms, rainfall greater.

A HINT TO INVENTORS. It is noteworthy, says Knowledge that some of the most brilliant practical applications of electricity have been simply the development, by experiment and study, of familiar and apparently insignificant effects. Every telegraph operator has been familiar, ever since there has been a telegraph, with the phenomenon of the electric spark, and with the fact that a strong current will heat a conductor of high resistance; yet the electric-arc lamp is simply a development of the former and the incandescent lamp of the latter phenomenon. In the same way the "polarization" of batteries was known to telegraphists for years, and was regarded by them simply as an impediment to be got rid of; but the Planté and Faure accu-mulators are only developments of the same principle of "polarization."

THE TRANSIT OF VENUS.

From The London Spectator. "Now, tell me, tell me, Lady Venus.
What unkind thought has stept between us,
That you should seek to cross me so,
In face of all the world below?"

"No unkind thought has stept between us,"
Softly answered Lady Venus,
"But those dear spots upon your face
Are watched by all the human race, And this for years has been my dream,-A moment on your cheek to gleam, That in your glory men might see More beauty than before in me."

You touch my heart, O Lady Venus! And though the space is great between us,
My beams shall kiss you as you go.
And men shall ever after know
That Venus richer beauty won
By having dared to cross the Sun."

MR. FROUDE ON DEMOCRACY.

From The Formightiy Review.

People talked in Aristotle's time, and they talk now, as if the voice of a majority on any given conasion was, or ought to be, declaive, and could not be wrong. And yet it has been often observed that all the great beneficial movements among manking have been the work of determined minorities. When the matter in question can wait, the

with him.

And when any great question rises even in the And when any great question rises even in the most advanced community, any question which touches the heart and conscience of men, as it was with those poor Dutchmen that I spoke of, the same difference is produced by superior containey, by superior courage, by readiness to die rather than submit to what is faise or unjust; and in such cases minorities of brave men have carried their point against the finajority by force, trusting to time to acquir them, and so I believe they will continue to do as long as there is any worth in human nature. The army which made Oliver Cromwell Protector represented but a small fraction of the English nation counted by heads. If the vote English nation counted by heads. If the vote could be taken now, the English nation would per-haps still be found equally unfavorable to him. Yet Cromwell is slowly taking his place in the es-timate of the intelligent part of mankind as one of the very greatest and best Englishmen that ever

timate of the intelligent part of maniard as one of the very greatest and best Englishmen that ever lived.

But notwithstanding objections, Aristotle remained of opinion that government by a majority of votes was on the while the happiest and most secure. No adjustment of income allairs will work perfectly and under all circumstances. If nature had provided any such arrangement, it would have been discovered long ago, and we should all have gone to sleep. No form of government will save us from our own faults. If the commonwealth is to prosper, we have each our own parts to play. It is the continual struggle, the continual necessity to waich our own lives, which gives soirit and force to when an existence. And this Aristotle saw. He did not condemn monarchies; he did not condemn aristocracies. Under either of these forms a brave, list—abiding people might be contented and become great. The government of a nation by itself had its dangers also, and might degenerate into mobrule and anarchy. Majorities might go wrong, being composed of fallible human beings. But taking things for all in all, the national spirit was likely to rise higher, the laws were likely to be more impartial, and to be more impartially executed, when the people were their own legislators and chose their own officers. Decidedly that State ought to be in its happiest condition when all citizens had equal rights, when there was no privilege either of birth or wealth, and each man could rise to an connition for which nature and industry had qualified him.

"MONSIEUR."

" MONSIEUR."

RELIGIOUS INTELLIGENCE.

Day recently sent a number of its reporters to some of the prominent elergymen of that city some of the prominent elergymen of that city with several numbered questions relating to the power of the Church. The answers of the various elergymen were published in full, and together they make up an interesting symposium on a subject that is just now of vital interest. The Rev. Campbell Fair, an Episcopalian, did not think the Church was losing its hold on wear, on the capterary has thought it. palian, did not think the Church was losing 118 hold on men; on the contrary he thought it was becoming stronger. Scepticism prevails largely among the members of trades unions who give us strikes and riots and pillage. Among the SoO doctors of Baltimore he had only heard of one infidel. The Rev. John J. Murray, a Methodist, thought that the preaching of to-day is as interesting as it ever was, and that the Church never was so strong as it is at the present time. The Rev. R. H. Pullman, ing of to-day is as interesting as it ever was, and that the Church never was so strong as it is at the present time. The Rev. R. H. Pullman, a Universalist, presented the other side of the case. He drew a distinction between the Church and Christianity, saying while the Church is surely declining; Christianity as a religion was never stronger, and Jesus never more truly Lord than he is to-day. The cause of the Church's decline, he says, "is found in the character of the so-called evangelical creeds. The doctrine that the sin of Adam involved the endless damnation of the whole human race, and the doctrine of the atonement that Christ suffered this penalty on the crosspaid the debt in full—so making it possible for all those having faith in this transaction to be saved, i. e., escape this hell; the doctrines of probation, of plenary inspiration, and of endless suffering in hell; also the doctrine of an arch fiend, called the devil possessing superhuman powers, roaming at will through the universe, omnipresent, and not second to God himself in omnipotence if judged by his following—these doctrines, fundamental in the so-called evangelical sects, are losing their hold on thinking men because of the unspeakable herror and blood-thirstiness of some of them, the inconsistency and absurdity of others, and the unscripturalness of them all. While I believe there has been a stand-still and that the Church as a whole is not keeping up with the the unscripturalness of them all. While I believe there has been a stand-still and that the Church as a whole is not keeping up with the increase of population, and so is on the decline. I am strong in the cheerful conviction that this decline is being overruled for good in that attention is now being called to the cause of the decline, the good effect of which is already sing gested in the mighty revolution developing. suggested in the mighty revolution developing against the old creeds and confessions of faith within the very ranks of the so-called evangelical sects, which is full of promise of a brighter day for Christianity, a day of greater unity and sweeter fellowship. Discussions of the doctrines of probation, inspiration and endthe doctrines of probation, inspiration and end-less hell occupy large space in toth the relig-ions and secular newspapers and magazines of the day, which is significant of the revolution. While then I see decline I see also signs of the morning full of hope for the day when Chris-tianity, relieved of the weight of dead dogmas, will teach with new life the world it is designed to save. The best preaching to-day is the so-called liberal preaching. Its tone is clear and ringing in the Unitarian and Universalist pul-pits; nor is it confined to these. In many other pulpits advanced preachers have given up preaching the old creeds and are doing noble work for the cause of real Christianity. When-ever it is known that a liberal preacher is in any of the orthodox pulpits, there the people go in crowds. This is one of the signs of the times and indicates that liberal preaching is the strongest and most effectual against the The best preaching to-day is the sothe strongest and most effectual against the scepticism of the time. What is needed more than all clse is the preaching of religion as Jesus preached it—plan, simple, beautiful. Real religion has attraction for every human heart; there is no subject that can be made more popular than religion with the heart of more popular than religion with the next of Jesus in it; there is no theme more practical or more subline. Let the preachers of to-day bring out religion as a life the most beautiful, and the safest and most successful to be embraced, because it is life the highest and the most divinely real; let this be shown and it will not need the promise of a fature heaven to be the property of the property bribe people to take it, nor the threat of end-less hell if they don't. Religion is life. So un-derateed it will stand on its own merits, and vill attract with an irresistible persuasiveness

The Board of Managers of the Protestant Episcopal Missionary Society have issued their Advent and Epiphany appeal. The following is an abstract of the work done by the society: There are now thirteen Missionary Bishops in the domestic field who receive their entire salaries and travelling expenses from the Board. Under them are 375 missionaries, of whom 28 are engaged in work among the colored people of the South. I in work among the Chinese in are engaged in work among the colored people of the South, 1 in work among the Chinese in San Francisco, and 25 in work among the Indians, 7 of the latter being native Chippewas, 3 native Dakotas, 1 a native Cheyenne, and 1 a native Kiowa. Twenty native catechists, of whom 6 are candidates for holy orders and 13 women helpers, are at present engaged in educational and mission work among the Indiana. cational and mission work among the cational and mission work and at 24 stations. Nine unordained men and 18 women are also now employed as teachers in colored schools. Ten of the Missionary Bishops, in addition to their mission work proper, are giving earnest and successful attention to the work of Christian successful attention to the solid schools, the training of young men of the soil for the min-istry of the Church being especially cared for. istry of the Church being especially called nor The number of foreign stations is 148 (prin-cipal and subordinate); 34 of which are in Western Africa, 31 in China, 15 in Japan, 1 in Greece, 14 in Haiti and 52 in Mexico. The whole number of laborers is 347 (including whole number of laborers is 347 (including candidates for holy orders), of whom 3 are Missionary Bishops, I the Bishop of the Haitien Church, and I a Bishop of the Mexican Church; 56 are presbyters and deacons (foreign and native), 3 are physicians, 33 are foreign lay workers, 3 are business agents, and 246 are particle extendiglates for workers, 3 are business agents, and 216 are native catechists, lay readers, candidates fo oly orders and teachers.

B. F. Underwood, one of the editors of The Index, in a recent lecture in Milwanice, spoke as follows of Christianity: "When the masses think of Christ they think of the tenderness, the third the sacrifice that he made: and it is these ideas that have given the doctrine per-sistence, not the idea of substitutionary sacri-fice. The mistake of the Christian is that he ucnopolizes for one being traits that belong to the nopolizes for one being traits that belong to the race. So the doctrine of the fall of man has a truth at the bottom of it. This view of comparative religion is scientific and satisfactory. The genuine radical is one that goes to the rcot of things, not the one that is most violent in his denunciations. Eighteenth century criticism was destructive. We cannot censure the free-thinkers of the age of Voltaire. They had to fight to live. But our own time is more discriminating and constructive It does not try to break with the past, but recognizes that all human history is a growth. Revolutions are indeed someis a growth. Revolutions are indeed some-times inevitable, but it is through continuous evolution that the most desirable results are secured, and it is the primary principle of evolution that progress moves along the lines of existing institutions. They are not destined to existing institutions. They are not destined to sudden extinction but to gradual medification according to the changing and advancing needs of humanity.

The St. James's Gazeile says: "The conversion of a French commune en bloc to Protestantism is a most uncommon occurrence; yet, so far as this can be effected by a vote of the municipal council, it has just to be place in the commune of Châtel-Guyon, in the Department of Puy-de-Dôme. The inhabitants of this of Puy-de-Dôme. The inhabitants of this town having had reason to complain of their cure requested the Bishop of the diocese, Moncare requested the Bishop of the diocese, Mon-signor Robert, to remo ve and appoint another cure in his stead. The Bishop, however, de-clined to comply with their request; and the municipal council accordingly assembled in solemn conclave and passed a unanimous res-olution to the effect that, the Bishop having declined to accede to their just demands, a Prot-estant temple be immediately crected at Châtel-Guyon. Pending the completion municipal council accordingly assembled in solemn conclave and passed a unanimous resolution to the effect that, the Bishop having declined to accede to their just demands, a Protestant temple be immediately crected at Châtel-Guyon. Pending the completion of the edifice a committee was appointed to make temporary arrangements for the performance of the Protestant service in a private house. A local paper states that Pastor Cornud, in compliance with an invitation addressed him by the inhabitants, proceeded to Châtel-Guyon last Saturday, and held his first conference there in the presence of fully 350 persons of both sexes."

A clergy man of Louisville, Ky., the Rev. C. J. K. Jones, preached last Sunday on the question: "Shall women preach?" The following passage will explain his attitude on the question: "The woman who has something to say and can say it acceptably has as much right to speech and attention on the platform or in

the pulpit as though she wrote it in prose and poetry. I cannot understand why Mrs. Livermore or Miss Willard should not speak from pulpits as well as George Eliot may speak through prose or Mrs. Browning or Adelaide Is THE CHURCH DECLINING !- The Baltimore Proctor speak in poetry. The woman who has something to say and can say it acceptably is of more concern to the world than the man who has nothing to say and makes a success thereof. Women have been preachers for generations as mothers, as writers, as companions. It seems a trifle egetistical for any man to say that he belongs to the only specially chosen class. Another objection is often raised: 'To preach is outside of woman's sphere.' How do preach is outside of woman's sphere. How do we know! The test of a singing bird is its capacity to sing; the test of a woman's call to preach is her ability to do it."

A clergyman of Oakland, Cal., the Rev. Mr. Spreeher, recently left his church in that town to accept a call to a church in San Francisco, at to accept a call to a church in San Francisco, at a much larger salary, giving as a reason that the Lord had called him. The Stockton Independent preaches a homely lay sermon to him on this wise: "Mr. Sprecher has fallen under the severe criticism of the press for professing to act under Divine guidance in accepting a call to the more popular charch. It was a hypocritical pretence. A preacher is no more called of God to leave one field of labor for abother, than a lawyer or a doctor. We do not blame Mr. Sprecher for going over to San anot blame Mr. Spreecher for going over to San Francisco. Every man has a right to climb as high and make as much as he can. Talent is worth all it commands in the market. But he ghould not have gilded over his personal ambition to occupy a more popular pulpit with such a worn-out, exploded, sanctimonious conceit as he tried to cram down the throats of the good people of Oakland."

The report of the Ninth Annual Meeting of the Woman's Christian Temperance Union of this State, held in Oswego last September, has just been published. It makes a pampillet of 100 pages, and shows that during the past year the members of the union have been active and zealous in the prometion of temperance. Every good citizen must rejoice that such a noble work is being done in our midst. However much people may differ as to the methods by which temperance may be promoted, all will acknowledge that remoderate drinking is one of the great evils of this age. If the women shall succeed in doing something to abate it, they will deserve the thanks of all who have the progress of the race at heart.

The Freeman's Journal speaks with commend able trankness about the deplorable Purcell scandal. "The aged Archbishop," it says, "is in a helpless dotage, and tenderly nursed at the expense of the bankrupt diocese. His brother Edward, from being a small attorney and a ward politician, was lifted into the priesthood, and given by the simple-tainded Bishop com-plete control of the finances of the diocese. It was putting a beggar on horseback. Toward priests of the diocese who did not cringe to him he was a tyrant. He was a man of magnificence, with other people's money, for those that flattered him. So he came to trouble, and then, in place of asking judicious friends, went to extortioners in a vain effort to bridge over his disaster.

The Christian Advocate speaks vigorously about the late D. M. Bennett, whom it calls an immoral blackguard. "No Christian," it says "need be glad that he is dead or sorry that he lived so long; for if God regarded his living up to the time of his death as compatible with flis general plan for the government of the universe, it is not for those who profess to believe in God to sit in judgment upon any of His providences. Nor need we suppose that his personal influence will be perpetuated, for the word of inspiration has declared that the memory of the just is blessed, but the name of the wicked shall rot. Ife has earned one epitaph: 'His life was devoted to traducing Jesus Christ and undermining the foundations of

A writer in The Globe of Toronto, Canada, is A writer in The Globe of Toronto, Canada, is very much exercised over the fact that at the opening of the Provincial Parliament precedence was given to the Roman Catholic Archbishop Lynch. The papers stated that at the cereamony there were present "His Grace the Archbishop of Teronto, and Bishop Mahony, Bishop Sweatman," etc., and in the account of the State dinner given in the evening, "at the head of the table His Honor the Lieutenant-Governor, having his Grace Archbishop Lynch on his right, and the Hon. the Attorney-General on the left, also Mrs. Robinson, Bishop Sweatman," etc. He intimates that political teasons were at the bottom of this arrangement, which he coasilers discreditable to the foxwhich he considers discreditable to the Gov-

The Bishop of Rochester in England calls for £50,000 during the coming year for the purpose building ten new churches in his rapidly grow-ing diocese. While perhaps the English ang diocese. While perhaps the English Church may be open to criticism on many points, it certainly has shown during the last generation a commondable desire to meet the religious needs of the nation. The period from the beginning of the Tractarian move-ment until now will probably be known in the history of the Church as the church-building era, just as the Middle Ages were the era of cathetrals. And the difference between the great cathedral and the cosey modern church exactly marks the difference between the Middle Ages and to-day.

The Catholic Review thus states the religious question of the day: "The question is between authority in religion, as embodied in the infallible system of the Catholic Church, and the authority of the individual, embodied in his infallible ipse dicit. As leading medern scientists have taken ground against Christianity, it has become fashic mable to call their method, which assumes the infallibility of the individ-ual—the scientific method—as complete a piece of impertinent assumption, we must be allowed to say, as it would be possible to find in the whole range of literature, sacred and profane.

The Philadelphia Press describes a strange The Philadelphia Press describes a strange religious ceremony that took place in that city last Sunday. The members of the religious order known as the Union Bethel Charch of God believe in a strictly literal interpretation of the commands of the Saviour. Four times a year in pursuance of a law haid down by the church for the observance of members, the brethren before partaking of the holy sucrament devoutly engage in the washing of feet in humble imitation of their Lord and Master.

CURRENT RELIGIOUS OPINION.

It should be emphatically said, and so distinctly that nebody can misunderstand it, that in civil legislation the religious question is not taken into account. If this were a nation of Moslems, and the Moslem law required Friday to be observed by a cessation from labor and such public pursuits as would disturb the religious worship of the people, it would be the duty of the few Christians in the community to pay a decent respect to the law. That is all that is required of citizens of a Christian country in regard to the day of rest. The laws of all the States of this Union recognize bunday as the rest-day. Places of business are closed, and outward respect must be paid to the wiches of the overwhelming majority of the people. If one branch of trade is permitted, all must be. Exception is made only in those pursuits needful for the wants of daily life. One man must not buy and self for moneymaking, unless the rest may do the same. If the merchant may not self dry goods, the runseller must not drive his runsous trade. What is fair for one is fair for another. We do not want laws to compel men to go to church, or to pray or read their Bibles; not even to read the The Ner-York Observer. But we claim the right to be protected as criticens in the enjoyment of one day's rest in seven, when the wheels of ordinary traffic shall be quiet, and the "sweet restorer," a Sabbath, a rest shall be the boon of every man who, being wearied, wishes to recruit. This cannot be, unless Sunday or some other day in the week is secured to him by law,—[The New-York Observer.

HOME INTERESTS.

PRICES IN THE MARKETS.

PROSPEEOUS WEEK FOR THE DEALERS-POUL-TRY AND GAME HIGHER-GROCERIES LITTLE CHANGED.

The week preceding Christmas has been a prosperous one for the market-men. Fish have been rather lower than they were earlier in the month, while poultry of all kinds has been selling high. A few shad were received yesterday which were sold for \$1 50 each. Black bass from the South are 20 cents. Salmon trout, fresh caught, are 18 cents, and fresh caught whitefish are 20 cents. Small green picker-lare 18 cents; green turtle is selling at 20. Terrapin ranges from \$15 to \$36 a dozen; that from the South bringing \$15, and the diamond-backs scallops 37 cents a quart, and crawfish \$3 per 100. Oysters are plenty, Saddle-rocks bringing \$3 a hunered; East Rivers and Shewsburys \$1 50, and Blue Points 75 cents. Hard crabs are \$3 a hundred, and soft crabs \$2 a dozen. Frogviegs are worth 50 cents a pound.

Among the salt water fish, live cod is selling for 10 cents, haddock 10 cents, and white halibut 22 cents. Bass are 30 cents. Dressed cels are 18 cents. Live lotsters are seiling at 10 cents and boiled lobsters 12 cents. Fresh-caught saimon are \$1 50 a pound, while the frozen are only 45 cents, resh mackerel sell from 15 to 25 and Spanish mackerel are 35. cents. Smelts are in great abundance, and sell for 10, 15 and 20 cents, the highest priced coming from Rhode Island. Binetish are 15 cents, and sheepshead are Red snappers are ranging from 11 to 20 cents. A novelty in the fish market is whitebait, which comes from the southern side of Long Island and sells for 75 cents a pound.

There was not much change in the price of meat last week. Prime rib roasts cost from 20 to 22 cents; fillet of beef, 36; porterhouse steaks from 22 to 28; sirloin steaks, 22, and strloin reasts, 25 to 28; tongues are from 60 to 75 cents apiece. Hams being 16 cents a pound, shoulders, 12; boneless bacon, 16 cents, and loins of pork, 13. Lamb brings 12 cents for fore-quarters and 16 cents for hind-quarters. Mutton is about 3 cents che per than lamb. A shin of beef costs 60 ents. Corned beef is 15 cents a pound and -la-mode beef from 15 to 18 cents. Sweetbreads are of various prices, some seding for \$2 a dozen, while others cost \$7. Bologna sansage is 12 cents a pound. Veal culiets are 25 cents.

Poultry and game are pl-nifful, and of good qual-

Poultry and game are pl-nitial, and of good quality. State turkevs brought 22 cents a pound, drypicked 25 cents, and wild turkey from 30 to 40. Dry-picked chickens are 23 cents, capons 30, and State lowls 12 and 14. Philadetuhia turkeys sold for 25 cents, Delaware turkeys at the same price, while those from Chicago brought the lowest price—18 and 20 cents. State goese are 15 cents, woodcock are 75 cents a pair, pattidges \$1.75, grouse \$1.50, and English phensonts \$4. The canvashack ducks from Havre of Grace cost \$3.50 a pair, while those from Norfolk are a coltar cheaper. Mallards are \$1.a pair, and ical are the same price. Quall are \$2.50 per dozen, plover \$4, and supe \$4. Ventson is from 20 to 25 cents a pound. Hares bring 75 cents a pair, rabbits 50 cents, and squirreis \$1.50 a dozen. Bear's meat is 30 cents. A wild mongrei goose from Koston is considered very fine and sold for 40 cents a pound, and \$1 each is paid for wild for 40 cents a bound, and \$1 each is paid for wife geese. Read birds are \$1.50 per dozen, wild pigeons

geese. Re-d birds are \$1.50 per dozen, wild pigeons \$2.50 and rail birds, \$1.50.

Early Rose potatoes are \$1.25 a barrel and Burbanks \$1, squashes \$1, tornips 50 cents, r-d onions 75, and carrots 85. Globe artichokes from France are \$3 per dozen, and sail greens 15 cents a quart. Hot-house lettuce is 10 cents a bunch, core sailed 15 cents a quart, bleached dandelions 25, tomatoes from Boston 50, and ceiery 20 cents a bunch. Cranberties are 20 cents a quart, and spinach \$1 a basket.

hot as possible.

RUM SHERBET.—Rub loaf sugar over the rinds of three frosh oranges. To three quarts of water add the juice of a dozen large oranges; sweeten to taste with loaf sugar (using also the flavored sugar), flavor highly with rum, and freeze. Grated pingapple may be added when it is partly frozen, if theat

TUTTI-FRUTTI.—To one quart of boiled custard (flavored with vanilla) allow a quart of candied truits, assorted and chopped, and a gill of marssening. Freeze the custard, and when it is beginning to set in the freezer site is the frait, maraschino, and a pint of creum, whipped. Mould,

PLUM PUDLINGS.—One and a half points of

PLUM PUDDINGS.—One and a half peuads of suct, same quantity of raisins, same of currants altechopped very fine; two pounds of stale breadcrumbs, ha f a pound of flour, half pound of sugar, a little finely chopped citron, some powdered cloves and ginger; mix them well together, then beat five eggs, add to them a pint of sweet cider boiled down with a part of the sugar to rather more than half a part, which pour in and well mix. Do not put in more liquid though it may seem dry; press it firmly into the moulds, tie over with a cloth and put into boiling water; keep them boiling five hours; they can then be hung up till required, but should be boiled another two hours the day they are served.

PREPARING CURRANTS .- To swell the currants for cakes, after they are picked and cleaned, pour boiling water over them and let them stand covered over with a plate for two minutes, drain away the water, throw currants on a cloth to dry them, and do not use until they are cool.

them, and do not use until they are cool.

EVE PUDDING.—Put into a mixing bowl half a pound of fine bread-crumbs mixed with three ounces of suct chopped and sitted, four tait apples peeled, cored and chopped, a cup of cleaned currants, the rind and juice of a lemon, a little salt, three eggs, and a little sugar put into a pint of cider, with which it is to be well mixed. Boil in a cloth or mould two hours for steam it four hours), and serve with a hot liquid sauce flavored with nutmeg.

DEEP FRUIT PHES.—Fruit ples in deep dishes, such as made by the English and French, are preferable to ordinary fruit pie, because we obtain more juice and fruit. The best method of making them is as follows: Take a deep oval pie dish (chins, not tin), line the edge with paste, also line about half its depth inside. Now invert a small cup in centre (an egg cup is best), and one that will

stand a little above the edge of the dish: next fill the dish with fruit; then add a little water if the fruit has not much juice. Some fruits such as currants, cherries and raspherrias have enough juice. Also add sugar to taste; now cover this with a crust of short paste, wash it with water or white of an egg and dust with powdered sugar. Make a few fancy cuts on it before baking. The cup in the centre collects the juice, and if the whole of the pic is not eaten at one meal, what is left can be supplied with juice by simply lifting up the cup and allowing the juice to escape. The edge of this pictobe artistic should be pinched with the finger and thumb and then notched with a knife.

THE DIET OF CHILDREN.

Prom Cassell's Magazine.

Permitting children to sit at table with their cidets is the cause of a good deal of mischief and injury to their youthful digestions. A variety of dishes should never be permitted, and any attempt at wastefulness should be checked at once. Economy and self-denial can be taught at the children's table far more easily than at school.

The diet of children can hardly be too plain. If they require to be encouraged to eat by the administration of dainties, there must be something radically wrong somewhere. It is unlikely that that something is constitutional, more probably insufficient exercise is taken, or taken at wrong times, or the nursery is stuffy, or the bedroom badly ventilated, or the parents have forgotten that smishing and fresh air are as necessary to the healthy life of a child as wholesome food itself is.

The want of cleanliness, or frequent use of the bath, is many times the cause of indifferent appetite in children. Without cleanliness of erothes and cleanliness of person you cannot have healthy children. Without this the young blood seems poisoned, the child has neither buoyaney nor heart, appetite is deprayed or absent, and he grows up as pale and poor as a sickly plant.

Injudictous ciothing is another cause of dyspepsia. It is bad enough to eneass the body which has attained its full development in a tight dress, but it is runnous for a child to be clothed in tightly litting garments. Every organ of a child's body requires room to grew and expand; if it be in any way compressed, the circulation through it becomes lessened, and it is therefore sicklied and rendered weak.

Trghtness, therefore, of any portion of a child's walks.

Weak.
Trylitness, therefore, of any portion of a child's clothing ruins not only the organ directly underneath the construction, but indirectly those at a distance from it, for no daraming up of the circulation can be tolerated by nature. Tightness round the waist in children and young neople is the cause of many cases of dyspepsia, and in a lesser degree so is tightness of the neckerchief, by retaining the blood in the brain. Have your children's clothing loose, then, if you would see them healthy and happy. See, too, that at night they sleep not on feather beds, and that though warmly they are not heavily clothed.
Children should be fed with great regularity day by day. The parents, having chosen the hours for dinner, breakfast and tea, ought to see that the times are strictly adhered to.
Irregularity in meal-hours, and times of getting up in the morning and retiring to bed at hight, is not only prejudical to the present health of a child, but it teaches him habits which are greatly against his chances of success in after-life.

I need fardly speak here about the quality of the food that is placed before a child; against indigestible or too rich feed, against sauces and spices of all kinds, including curries; against heavy foods of the pancake, dough and dumpling kind, against unripe fruits, against too hot soup, against strong tea, and coflee, or beer, or against over-much butchers' meat.

Pray, mothers, do not forget thas an interval of Trghtness, therefore, of any portion of a child's

unripe fraits, against too hot soup, against strong tea, and collee, or beer, or against speer-much butchers' meat.

Pray, mothers, do not forget that an interval of rest should ensue between the meals you give your children, and do not rain their young dixestions by cramming them with cake, or buns, or sweets of any kind. To do so is worse than cruel, it is a sin, and a sin which you are but little likely to commit if you truly love them, and really wish to see them generate into strong and healthy men and women. Tarts and sweets and confectionery would be badenough in all conscience for children, even if they were always pure and unadulterated. But they are too often positively poisonous. Feed on plain and wholesome food regularly frem day to day, permitting to stailing between meals, and not forgetting the benefits that accrue from frequent changes of dict more especially as regards dinner. Do this and your children will live to bless you; do otherwise, and expect to see them sickly, with veins and arteries possessing no resiliency, with mucous membranes pale and flabby, pipes of lungs that the accident of a slight cold is sufficient to close, muscles of limbs so weak that exercise is a penance instead of a pleasure, and flesh so unwholessome that a pin's prick may cause a fester, and all this because the blood is impoverished through errors in diet.

Hochons lettine is 10 cents a bunch, corn and localist from Boston 30, and celety 20 cents a bunch. Crast-kolt.

Apples are becomin searce. Spitzonbergs are known and planned planted and had been selected as a superior of the control of the contr

dium), the leaves of which are used as a vegeta-These plants are to be seen growing in nearly every courtyard, and in some also I noticed the papola and plantain in those places where otherwise a cesspool would have been. All noxious accumula-tions are thus utilized in the soil, to the general health of the community.

AN ANGRY TREE.

From the Virginia (Nex.) Enterprise.

A gentleman of this place has a tree which is a species of acacia. It was grown from a seed brought from Anstraha. The tree is now a sapling some eight feet in height, and it is in full foliage and growing rapidly. It is legiminous, and very distinctly shows the characteristics of the mimosa, or sensitive plant. Regularly every evening, about the time the "chickens go to the roost," the tree goes to roost. The leaves fold together, and the ends of the tender twigs coil themselves up like the tail of a well-conditioned pig.

After one of the twigs has been stroked or handled, the leaves move uneasily and are in a sort of mild commotion for a minute or more. All this was known about the tree, but it was only yesterday that it was discovered that the tree had in it much more life and feeling than it had ever before been credited with. The tree being in quite a small pot, one which it was fast outgrowing, it was thought best to give it one of much larger size. Yesterday afternoon the tree was transferred to its new quarters. It resented the operation of its removal to the best of its ability.

Arriving at his residence about the time the tree had been transplanted, the geutleman found the house in grand commotion. On asking what was up he was told that they had transplanted the tree according to orders and the operation had "made it very mad."

according to orders and the operation had "made it very mad." Hardly had it been placed in its new quarters before the leaves began to stand up in all directions like the hair on the tail of an angry eat, and soon the whole plant was in a quiver. This could have been endured, but at the same time it gave out an odor most pungent and suckening—just such a smell as is given off by rattlesnakes and many other kinds of suckers in supervivous tensed. This odor so